



Request for City Council Committee Action From the Department of Public Works

Date: February 11, 2014

To: Honorable Kevin Reich, Chair, Transportation and Public Works Committee

Subject: **Layout Approval for Franklin Ave (CSAH 5) Bridge Rehabilitation**

Recommendation:

Approve project layout for the rehabilitation of the historic Cappelen Memorial Bridge (Franklin Avenue over the Mississippi River) and full bridge closure for up to 4 months (S.P. 027-605-029).

Previous Directives: None

Department Information:

Prepared by: Jack Yuzna, P.E. Principal Engineer 673-2415

Approved by: _____

Steven A. Kotke, P.E., Director of Minneapolis Public Works

Presenters in Committee: Jack Yuzna, P.E., Bridge Engineer
Jim Archer, P.E., Hennepin County Bridge Engineer

Financial Impact:

- Action is within the Business Plan

Community Impact:

- City Goals: The city's infrastructure will be well-maintained; people will feel safe in the city.

Supporting Information:

The Franklin Avenue Bridge, also known as Cappelen Memorial Bridge, is a concrete arch span over the Mississippi River between West River Parkway and East River Parkway in downtown Minneapolis. Built in 1923, it is a Minneapolis landmark and listed on the National

Register of Historic Places. Currently, the bridge is structurally deficient. It has a sufficiency rating of 47.6 out of 100, it is posted for vehicle load restrictions, and its condition continues to decline. The bridge is owned by Hennepin County.

The bridge rehabilitation project consists of: replacing the deck and cap beams; installing new railing and lighting; removing & repairing deteriorated concrete on the piers, arches, and abutments; and applying a surface coating to protect the bridge from further deterioration.

The bridge railing and lighting will be replaced with new elements that replicate the original design. The observation bays will be extended approximately 40 inches past the outside face of the river piers. This extension will recover about 75 percent of the original observation bay depth that was lost when the bridge was re-decked in the 1970s.

Stakeholders helped develop the project scope. The Minneapolis Heritage Preservation Commission, the Cultural Resources Unit and the State Historic Preservation Office, and Minneapolis Parks and Recreation Board, which owns the impacted park land on each end of the bridge, have all approved the project. The layout was developed with conceptual design input from the Pedestrian Advisory and the Bicycle Advisory Committees of Minneapolis (PAC and BAC). The BAC unanimously approved the project as proposed. The PAC approved with conditions because not all of their recommendations could be implemented due to project constraints.

The project plans meet the Secretary of Interior's Rehabilitation standards: The project should have no adverse effect on the historic bridge, it should improve accommodation for non-motorized users, improve connection to City parks and trails, and extend the life of the historic structure by at least 50 years while removing the vehicle load restrictions.

Layout:

The project will widen the east end deck of the bridge 10 feet (5 feet on each side) to better accommodate non-motorized users and provide 11-foot turn lanes. The width on the west end will remain the same. The bike lanes and sidewalk will be separated from vehicular traffic by an interior barrier the length of the bridge. On the west end approach to the bridge a new non-motorized connection will be established to allow for efficient movement to West River Parkway. At the east end, non-motorized users will cross the 5-legged intersection at the designated crosswalks because the on-street bike lanes will be moved to the outside and separated by an interior barrier.

Water Main:

The City of Minneapolis' water main is currently suspended under the south side of the bridge. The pipe enters and exits the embankment on each side of the river south of the bridge. Minneapolis Public Works Water Treatment and Distribution Services expressed the importance of stabilizing the water main support column on the east river bank. The water main on the bridge will be fully supported, with hanger support upgrades, as part of the Franklin Avenue Bridge rehabilitation project. These costs are included in the County's project. The City Water Department has indicated they may want to include water main

improvements in the County's project. The City will be responsible for those costs if they are included in the project.

Bridge Closure:

Hennepin County is requesting authorization for full closure of the bridge for up to 4 months. Staff analyzed a partial-width bridge closure option, which would lengthen construction impact for up to 2 years and require construction of a temporary bridge to support traffic. However, due to excessive costs, risks to the contractor, Hennepin County, and the City of Minneapolis, and an unrealistic schedule, it was deemed impractical to construct the temporary bridge. Full bridge closure was chosen as the most realistic and cost effective alternative to advance the project. The full closure is planned to occur during the summer months to coincide with City and University of Minnesota schools breaks. This closure is anticipated to occur in 2016.

Schedule:

Completion of Design & Bid Documents: March 2014

Project let date for construction: June 2014

Construction start: Spring 2015

Construction substantially completed: Fall 2016

Costs:

Project cost is estimated to be \$26 million and 100% funded by County, State and Federal sources. The City Water Department would be responsible for the cost of improving the City water main if that project is approved.

Attachments: Renderings (observation bays, lighting, and roadway section)
Project Map of Layout
Detour Routes

Cc: CM Gordon, Ward 2